

**Amendment to the Abstract:**

The Abstract has been amended. A revised Abstract is attached.

**Abstract**

The present invention pertains to a valve actuator for internal combustion engines, comprising includes at least one electromagnet (~~106<sub>17</sub>~~, ~~108<sub>1</sub>~~) and a magnetic plate (~~114<sub>1</sub>~~), whose movement controls the displacement of the valve. The parameters of the electromagnet and of the plate are such that at least part of the magnetic circuit formed by the electromagnet and the magnetic plate is in a state of magnetic saturation when the magnetic plate is located in the proximity of the electromagnet. The magnetic circuit is preferably in the state of magnetic nonsaturation when it is located at a distance from the electromagnet. According to one embodiment, the magnetic plate has at least one contracted part (~~144~~, ~~146~~) intended to be saturated when this plate is located in the proximity of the electromagnet.